

### REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1, 5–12 and 18–28, and 30 will be pending. By this amendment, claims 1, 18, 25–26 and 30 have been amended; and claims 2–4, 13–17, and 29 have been canceled. No new matter has been added.

#### §103 Rejection of Claims 1, 5–6, 9–12 and 18–25

In Section 3 of the Office Action, claims 1, 5–6, 9–12 and 18–25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bishop *et al.* (International Publication No. WO 99/49682; hereinafter referred to as “Bishop”) in view of Holmes *et al.* (U.S. Patent No. 6,636,749; hereinafter referred to as “Holmes”).

In the Background section of the Specification, it was disclosed that “[a] wireless local loop phone is used to communicate with a wireless cellular or PCS network. Typically, a wireless local loop phone includes a handset connected to a terminal unit.” *Specification, page 1, lines 11 to 13.* (emphasis added) To allow carriers to provide customers with improved wireless local loop services, “[t]he present invention provides systems and methods for implementing a wireless local loop phone that operates connected to or disconnected from a terminal unit.” *Specification, page 2, lines 21 to 22.* (emphasis added)

“The wireless carrier provides a separate interchangeable component to specialize the phone handset for the target service.” *Specification, page 3, lines 29 to 30.* (emphasis added) For a customer using fixed wireless local loop (“WLL”) service, the wireless carrier sells a WLL phone attached to a terminal unit by a power connector cable which is not removable from the

WLL phone by the end consumer. For a customer using a mobile wireless service, the wireless carrier sells the same WLL phone but instead with a removable battery and without a terminal unit. For both types of customers, the phone communicates with the same wireless network. When a customer wants to upgrade from fixed WLL service to mobile wireless service, the customer brings the WLL phone and connected terminal unit to the wireless carrier and the wireless carrier detaches the power connector cable and attaches a battery in place of the cable. (*See Specification, page 3, lines 16 to 27.*) A wireless carrier may therefore build the same phone handset for two different types of services and customers, resulting in a desirable savings in manufacturing cost and obviating the need to replace consumer hardware when the user decides to change the type of service. (*See Specification, page 3, lines 28 to 33.*)

In summary, a customer obtains from the wireless carrier a handset which has a multi-format power connection interface for connecting either a power connector cable or a removable battery, *but not both at the same time*. If the customer desires WLL service, the customer obtains from the wireless carrier a handset with a power connector cable attaching the handset to a terminal from which the handset receives power through the power connector cable. Alternatively, if the customer desires mobile wireless service, the customer obtains from the wireless carrier a handset with a battery instead of the power connector cable, the battery connected to the handset using the same multi-format power connection interface as does the power connector cable. If a customer first obtains a handset with a terminal and connected power connector cable for WLL service but later wishes to upgrade to mobile wireless service, then the customer takes the handset, power connector cable, and terminal to the wireless carrier and the wireless carrier removes the power connector cable — because the customer is unable to

do so — and replaces it with a battery. Thereafter, the customer uses the handset in mobile wireless service mode.

Embodiments of the present invention therefore provide systems and methods which address the improvements stated above. For example, claim 1 for a convertible phone system for use by an end user as presented herein includes:

a *terminal unit*;

a power connector cable coupled to said terminal unit; and

a *handset* including a multi-format power connection interface,

wherein said handset is configured to operate in only a fixed wireless loop phone service mode using power provided through said power connector cable when said power connector connection cable is connected to said multi-format power connection interface of said handset,

wherein said power connector cable is not removable from said multi-format power connection interface by said end user, and

wherein said handset is configured to operate in only a mobile wireless phone service mode when said power connector cable is disconnected from said multi-format power connector interface and a battery is connected to said multi-format power connection interface of said handset in replacement of said disconnected power connector cable.  
(emphasis added)

Accordingly, one aspect of claim 1 includes at least a terminal unit; a power connector cable coupled to the terminal unit; and a handset including a multi-format power connection interface, where the handset is configured to operate in only a fixed wireless loop phone service mode using power provided through the power connector cable when the power connector

connection cable is connected to the multi-format power connection interface of the handset,  
where the power connector cable is not removable from the multi-format power connection  
interface by the end user, and where the handset is configured to operate in only a mobile  
wireless phone service mode when the power connector cable is disconnected from the multi-  
format power connector interface and a battery is connected to the multi-format power  
connection interface of the handset in replacement of the disconnected power connector cable.  
As stated in the Specification, “the handset 100 places and receives calls through the wireless  
network as a wireless local loop phone or mobile wireless phone depending on the connection or  
disconnection to the terminal unit.” *Specification, page 5, line 33 to page 6, line 1.* (emphasis  
added)

In contrast, Bishop does not teach or suggest systems or methods in which connecting a  
power connector cable to the multi-format power connector interface of a handset specializes the  
handset to a fixed wireless local loop phone mode of service, and disconnecting the power  
connector cable from the multi-format power connector interface of a handset and connecting a  
battery to the multi-format power connector interface of a handset in replacement of the power  
connector cable specializes the handset to a mobile wireless phone mode of service. Bishop  
discloses instead a wireless device with a serial port through which it may receive power or be  
charged. (*See Office Action, page 3, lines 8–10.*) Further, “Bishop fails to disclose a power  
connector cable coupled to [a] terminal unit.” *Office Action, page 3, lines 16–17.* Moreover,  
“since the mobile telephone 104 is a wireless mobile device, it has an additional power source  
such as a battery power the device when it is disconnected from the terminal unit ....” *Office*  
*Action, page 3, lines 10–12.* Because Bishop fails to disclose the limitations discussed above  
regarding, *inter alia*, changing the mode of service of a handset by disconnecting a power

connector cable from a multi-format power connector interface of the handset and connecting a battery as a replacement to the power connector cable, Bishop therefore fails to address all the limitations of claim 1. Accordingly, claim 1 should be allowable over Bishop.

Holmes is cited in the Office Action for disclosing a power connector cable as a “power and audio cord 108” with a “Bluetooth module,” the cord coupled to a phone power and audio connector. (*See Office Action, page 3, lines 18–21, and Holmes, Fig. 6*) However, Holmes further discloses “[a]nother advantage [of Holmes’ invention] is that users in a vehicle also often connect their wireless phone to the vehicle power supply in order to conserve battery power and possibly to recharge the battery.” *Holmes, Col. 1, lines 40–43.* (emphasis added) Holmes thus contemplates that wireless phones have a battery for providing power, and further the use of a power cord with which to conserve battery power and recharge the battery. Thus, Holmes teaches the use of a power cord simultaneously with a battery. As such, Holmes fails to teach or suggest systems or methods in which connecting a power connector cable to the multi-format power connector interface of a handset specializes the handset to a fixed wireless local loop phone mode of service, and disconnecting the power connector cable from the multi-format power connector interface of a handset and connecting a battery to the multi-format power connector interface of a handset in replacement of the power connector cable specializes the handset to a mobile wireless phone mode of service. Holmes thus fails to address all the limitations of claim 1. Therefore, Bishop and Holmes, individually or in combination, fail to teach or suggest all of the limitations of claim 1 as presented herein.

Based on the foregoing discussion, claim 1 should be allowable over Bishop and Holmes. Since independent claims 18 and 25 parallel claim 1 and recite similar limitations as recited therein, claims 18 and 25 should also be allowable over Bishop and Holmes. Further, since

claims 5–6 and 9–12, and 19–24 depend from one of claims 1 and 18, claims 5–6, 9–12, and 19–24 should also be allowable over Bishop.

Accordingly, it is respectfully submitted that the rejection of claims 1, 5–6, 9–12 and 18–25 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is requested.

§103 Rejection of Claims 26–28.

In Section 4 of the Office Action, claims 26–28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bishop in view of Nagata (U.S. Patent No. 6,628,966).

Based on the foregoing discussion regarding independent claims 1, 18 and 25, and because independent claim 26 parallels claims 1, 18 and 25 and recites similar limitations as recited therein, claim 26 should also be allowable over Bishop.

Nagata was cited for teaching “a multi-format power interface compatible with a power connector and a battery (portable digital telephone 6 is provided with the external connector 5, and a battery [8]).” *Office Action, page 12, lines 11–13*. Even assuming that Nagata teaches a “multi-port power connector,” Nagata clearly shows in Fig. 1 that the external connector 5 couples to the portable digital telephone 6 which includes a battery 8. As such, Nagata fails to teach or suggest disconnecting a power connector cable from a multi-format power connector interface of the handset and connecting a battery as a replacement to the power connector cable, hence failing to address all the limitations of claim 26. Therefore, since claim 26 should be allowable over Bishop as discussed above, Bishop and Nagata, individually or in combination, fail to teach or suggest all the limitations of claim 26, and claim 26 should be allowable over Bishop and Holmes. Since claims 27–28 depend from claim 26, claims 27–28 should also be

allowable over Bishop.

Accordingly, it is submitted that the rejection of claims 26–28 based upon 35 U.S.C. §103(a) have been overcome by the present remarks and withdrawal thereof is respectfully requested.

### §103 Rejection of Claim 30

In Section 5 of the Office Action, claim 30 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Inubushi *et al.* (U.S. Patent No. 5,548,824) in view of Bishop.

As presented herein, claim 30 provides at least that the power connector cable connects to the multi-format power connection interface of the handset in replacement of the disconnected battery to provide power to the handset, and the power connector cable is not removable from said multi-format power connection interface by an end user. As stated in the foregoing, for a customer using fixed WLL service, the wireless carrier sells a WLL phone attached to a terminal unit by a power connector cable which is not removable from the WLL phone by the end consumer. (*See Specification, page 3, lines 16 to 18.*)

Inubushi is cited for disclosing, as stated in the Office Action, a “portable radio communication device with an interface for a battery 7a, 30, 31, 29 and external power source 8a, 9a, see fig. 6.” *Office Action, page 13, lines 8–10*. However, Inubushi states that it is “an object of the invention to provide a portable radio communication device having a slim ... main unit to which a battery power supply is fitted for enabling the user to select the battery power supply or an external power supply for use as required.” *Inubushi, Col. 2, lines 23–28*. By disclosing that the user is enabled to select between a battery or external power supply, Inubushi fails to teach or suggest connecting a power connector cable to a multi-format power connection

interface of a handset in replacement of a disconnected battery to provide power to the handset, where the power connector cable is not removable from said multi-format power connection interface by an end user. As such, Inubushi fails to teach or suggest all of the limitations of claim 30. Claim 30 should therefore be allowable over Inubushi.

Bishop was cited for disclosing, as stated in the Office Action, that “when mobile telephone 104 is docked with docking unit 102, an incoming call passes to wireline communication devices 110 as if attached to a single line for wireline service ....” *Office Action, page 13, line 22 to page 14, line 2*. However, like Inubushi, Bishop fails to teach or suggest connecting a power connector cable to a multi-format power connection interface of a handset in replacement of a disconnected battery to provide power to the handset, where the power connector cable is not removable from said multi-format power connection interface by an end user. As such, Bishop also fails to teach or suggest all of the limitations of claim 30. Claim 30 should therefore be allowable over Bishop. Since claim 30 should be allowable over Inubushi as discussed above, Inubushi and Bishop, individually or in combination, fail to teach or suggest all the limitations of claim 30.

Accordingly, it is submitted that the rejection of claim 30 based upon 35 U.S.C. §103(a) have been overcome by the present remarks and withdrawal thereof is respectfully requested.

#### §103 Rejection of Claims 7 and 8

In Section 6 of the Office Action, claims 7 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bishop in view of Holmes as applied to claim 1, and further in view of Bryson (U.S. Patent Appl. 2005/0037810).

Based on the foregoing discussion regarding independent claim 1, and since claim 7



depends from claim 1, and claim 8 depends from claim 7, claims 7 and 8 should also be allowable over Bishop and Holmes. Bryson was cited merely for disclosing a telephone comprising a data communications module that includes a command interface module.

However, like Bishop and Holmes, Bryson also fails to teach or suggest systems or methods in which connecting a power connector cable to the multi-format power connector interface of a handset specializes the handset to a fixed wireless local loop phone mode of service, and disconnecting the power connector cable from the multi-format power connector interface of a handset and connecting a battery to the multi-format power connector interface of a handset in replacement of the power connector cable specializes the handset to a mobile wireless phone mode of service. Therefore, since claims 7 and 8 should be allowable over Bishop and Holmes as discussed above, Bishop, Holmes and Bryson, individually or in combination, fail to teach or suggest all the limitations of claims 7 and 8.

Accordingly, it is submitted that the rejection of claims 7 and 8 based upon 35 U.S.C. §103(a) have been overcome by the present remarks and withdrawal thereof is respectfully requested.

### Conclusion

In view of the foregoing, entry of this amendment and the allowance of this application with claims 1, 5–12, 18–28 and 30 are respectfully solicited.

With regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of

were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-2075.

Respectfully submitted,

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